Credit Risk Management and profitability of Commercial Banks in Nepal

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Abstract

Credit risk management is an important aspect for a banking institution. This study attempted to investigate the relationship between credit risk management and profitability of commercial bank in Nepal. To examine its relationship the researcher uses ratio analysis and Karl Pearson's coefficient of correlation and also test its significance by taking 5 years ROA and ROE as dependent variables and non-performing assets(NPAs) and Capital Adequacy Ratio(CAR) as independent variables from each bank. The study also suggest that the bank should manage their credit risk well by interpreting customer historical data before providing loans and advance to the borrowers. Data was analyzed by using descriptive analysis, ratio analysis.co-relation.

Key words: credit-risk, non-performing assets, ROA, ROE

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Introduction

The economic development of Nepal requires expansion of productive activities which is the result of the capital formation and capital stock of the country. The change in the capital stock of the country is known as investment. Investment is key factor for capital formation. Investment promotes economic growth and contributes to a nation's wealth. Investors desire to earn some return from the investment. Without any return there is no any investment. Investment will block, if there is no return.

Commercial banks are the most important savings, mobilization and financial resource allocation institutions. In performing this role, it must be realized that banks have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investment. One key factor that determines the success of any banking institution is sound credit management. According to Mohammad & Garba (2014) credit risk is the possibility of losing the outstanding loan partially or totally due to credit events (default risk). Decision of commercial bank for out loans influenced by various factors such as interest rate, volume of deposits, the level of domestic and foreign investment, liquidity ratio, prestige and recognition of bank. Credit creation is the main income generating activity for the banks. But this activity involves huge risks to both the lender and the borrower. The risks also depends on customers obligations per the contract due date or anytime thereafter can greatly jeopardize the smooth functioning of a bank's business. A bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy.

Strong risk management system can do more than just mitigate economic risk. It confers competitive advantages to commercial banks and private lenders by improving their decision making. Implementing a credit risk management strategy can result in increased financial security for lenders and provide borrowers with loans they can handle to build their credit.

Understanding the credit risk management process, best practices and techniques is the first step in crafting a risk assessment solution. When a borrower applies for a loan, the lender must evaluate their reliability to make future monthly payments. Beyond requests for information on a borrower's current financial situation and income, many lenders will also want to see their borrowing and payment history.

Credit means a provision of our commitment to provide funds or substitutes for funds to a borrower, including off-balance sheet transactions, customers' lines of credit, overdrafts, bills purchased and discounted and finance leases.

Risk means the exposure to a chance of loss or damage. Risk is the element of uncertainty or possibility of loss that exist in any business transaction. Credit risk is the likelihood that a borrower or counter party will be unsuccessful to meet its National Board Ligation in accordance with agreed terms and conditions.

Credit risk refers to the probability of loss due to a borrower's failure to make payments on any type of debt. traditionally, it refers to the risk that a lender may not receive the owed principal and interest, which results in an interruption of cash flows and increased costs for collection. Excess cash flows may be written to provide additional cover for credit risk. Although it's impossible to know exactly who will default on obligations, properly assessing and managing credit risk can lessen the severity of a loss. Interest payments from the borrower or issuer of a debt obligation are a lender's or investor's reward for assuming credit risk.

Credit risk management is the practice of mitigating losses by understanding the adequacy of bank's capital and loan loss reserves at any time. Therefore, no matter the sources of the generation of income or the economic policies of the country, commercial banks would be interested in giving out loans and advances to their numerous. Customers bearing in their mind, the three principles guiding their operations which are profitability, liquidity and solvency.

Liquidity and profitability are often seen like different sides of a coin. According to the risk and return theory, which states that the higher the risk, the higher the return and vice versa. Profitability and liquidity are not in the same line. They have an inverse relationship because the more liquid a company indicates that funds are confined to liquid assets, making them inaccessible for productive activities that generate profit or for investments. Liquidity is important for the short-term, the more liquid a company is, the lower chance of it being unable to pay its short-term debts. Liquidity is really important for a company's survival. Therefore, a financial manager must find the right balance between liquidity to ensure the survival of a company and also keep profitability maintained in order to give the optimal return for its shareholder. The risk and return theories indicates that the relationship between liquidity and profitability should be negative; there have been studies that produce different results. These findings seems to be really interesting because they indicate that there are different kind of relationship between liquidity and profitability in different industries, and these relationship in different industries might be different in different countries as well.

Solvency refers to the company's ability to meet its obligations in the long term. It means the company's ability to pay its obligations in the long-term including interest and principal debt. Solvency ratios provide a general description of the debts in the company's capital structure, as well as the ability of cash flows to cover interest expenses and fixed costs. Financial structure is an important tool by which to identify the risks level that surround the company. It helps to maintain the financial independence of the company and reduce risks, as well as reduce financing costs and improve profitability Fixed costs are the most important factor that reflects on the performance and profitability of the company both in terms of the production process or financing costs. This refers to the need to work to reduce this type of costs, especially financing costs which will reflect in the reduction of total costs, and thus to improve the profitability. Debt capital can also have a positive effect on profitability. Debt allows companies to leverage existing funds, thereby enabling more rapid expansion. The effective use of debt financing results in an increase in revenue that exceeds the expense of interest payments.

Credit risk management has turned out as a vital issue in the current intensely complicated and competitive business environment. Undoubtedly, after recent financial crisis, it can be believed that banking sectors at present are the largest financial institution. Business and industries are heavily dependent upon the credit grants from these banks. The uncertain and volatile financial environment all across the globe has increased credit risk for the banking institutions, which is ultimately affecting the level of their profitability.

Management of bank risks is the most important factor for financial stability and economic growth in the developed economics. Management of trade off between the risk and returns is important for sustainable profitability of banks and other financial institutions. Among risk in banking operation credit risk which is related to substantial amount of income generating assets is found to be important determinants of bank performances. So credit risk management capability of a bank remained a live managerial discourse in financial management and overall health of financial institution depended upon the power management of credit risk. The risk focused examination process has been adapted to credit the inspection process to the more risk areas of both operation and business. Credit risk is considered as greater risk from all other risk effecting in the busincial performance of bank. Consumer credit risk can be measured by five Cs:credit history, capacity to repay, capital, the loan's conditions and associated collateral.

Major problem of the banking sector in Nepal is the Credit Risk. Poor lending practices, which are indicated by poor financial analysis of borrowers, inadequate or substandard collateral and improper portfolio analysis, poor tracking of credit and intention of borrowers to default have resulted in the high amount of Non Performing Loan of commercial banks.

A bank is a financial institution which is involved in borrowing and lending money. Banks take customer's deposits in return for paying customers an annual interest payment. The bank then uses the majority of these deposits to lend to other customers for a variety of loans. The difference between the two interest rates (deposit interest and lending interest) is effectively the profit margin for banks. Banks play an important role in the economy for offering a service for people wishing to save. Banks also play an important role in offering finance to businesses who wish to invest and expand. These loans and business investment are important for enabling economic growth. The general objectives of this study are to establish the effect of credit management on the profitability of deposit money banks in Nepal. The specific objective of the study includes:

i To measure the credit risk and profitability of the banks through ROA and ROE.

ii To explore the relationship between credit risk and profitability through non- performing assets and loan and advance of banks.

Research Questions

In order to achieve the above study objectives, the researcher aim at addressing the following questions in relation to the selected banks.

(i) How does the commercial bank manage their credit risk and maximize the profitability?

(ii) What is the relationship between credit risk management and profitability of the banks?

The goal of the credit risk management is to maintain credit risk exposure within proper and acceptable parameters. It is the practice of mitigating losses by understanding the adequacy of bank's capital and loan reserves at given time.

Literature Review

Credit risk means the risk of credit loss those results from the failure of a borrower to honor the borrower's credit to the financial institution. The default risk on a debt that arises from a borrower who fails to make the required payments is called Credit Risk. Any lender would include this as a first resort which includes principal and interest along with disruption to cash flows and the collection cost. The loss may be partial or even complete in many cases. Higher borrowing costs are always associated with higher credit risk levels in an efficient market. Due to this reason, the cost of borrowing can be used to conclude credit risk based on the assessment by the participants of the market.

Conceptual Framework

Risk refers to uncertainty on the investment faced by the investors It is the possibility that actual outcomes may be different from those expected. Risk can be defined as the possibility of deviation of the actual return from the expected return. Kupper (2000) defines risk as the volatility of corporation's market value. Risk management, on the other hand, is the process of measuring or assessing risk and then developing strategies to manage the risk. In general, the strategies employed include transferring the risk to another party, avoiding the risk, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk.

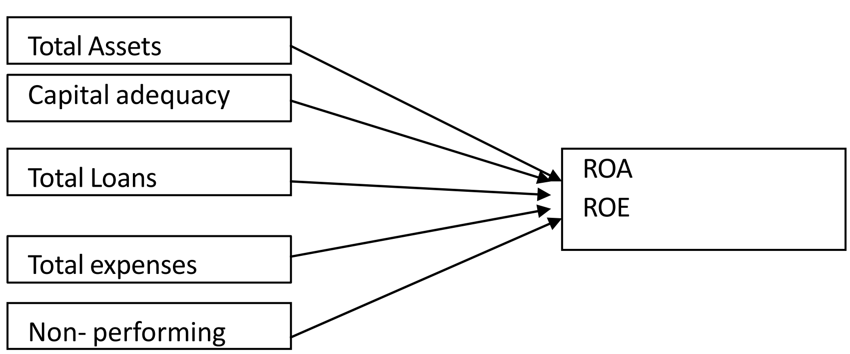
Heffernan (1996), observed that credit risk as the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan. Thus, when this occurs or becomes persistent, the performance, profitability, or net interest income of banks is affected. An increase in bank credit risk gradually leads to liquidity and solvency problems. Credit risk may increase if the bank lends to borrowers it does not have adequate knowledge about.

Banks and financial institutions mobilize deposits and utilize them for lending. Generally lending business is encouraged as it has the effect of funds being transferred from the system to productive purposes which results into economic growth. The borrower takes fund from bank in a form of loan and pays back the principal amount along with the interest. Sometimes in the non performance of the loan assets, the fund of the banks gets blocked and the profit margin goes down. To avoid this situation, bank should manage its overall credit process. Bank should deploy its credit in such a way that every sectors of economy can develop. Credit management comprises two aspects; from one angle it is that how to distribute credit among all sectors of economy so that every sector can develop and banks also get profit and from the other angle, how to grant credit to various sectors, individuals and businesses to avoid credit risk. Credit management is concerned mainly with using the bank's resource both productively and profitably to achieve a preferable economic growth. At the same time, it also seeks a fair distribution among the various segments of the economy so that the economic fabric grows without any hindrance as stipulated in the national objectives, in general and the banking objectives, in particular.

Theoretical Framework

In banking terminology, credit refers to the loans and advances made by the bank to its customers or borrowers. Bank credit is a credit by which a person who has given the required security to a bank has liberty to draw to a certain extent agreed upon. It is an arrangement for deferred payment of a loan or purchase. (Wikipedia dictionary) Bank risk management theory which was developed by David H. Pyle University of California was used to study why risk management is needed and outlines some of the theoretical underpinning of contemporary bank risk management with an emphasis on market and credit risks. This theory indicates that credit and market risks have an effect directly or indirectly on the banks survival. As applied to this study, this theory holds that researcher would expect the independent variables credit risk indicators to influence or explain the dependent variable which are banks profitability because without effective and efficient credit risk management, banks profitability, liquidity, solvency are unthinkable (David, 1997).

Factors influences the ROA and ROE



Independent variables **Dependent variables**

Research gap

Most of the researcher have focused on one or several countries and showed fferent results. However no researcher has put the research in Nepal using all the deposit oney banks in Nepal. Therefore researcher has found the existence of geographical gap nd devotes the effort to conduct a research on it. Most research work is explored on credit management and profitability on banks covered up to 073/74. So researcher wants to fill the gap.

Non-performing assets (NPA)

"Non-performing Asset" means an asset in respect of which (1) interest or principal (or installment thereof) is overdue for a period of more than 180 days(in)interest for principal is overdue for a period of more than 180 days from the expiry of planning period, wherever applicable(iii) any other receivable, if it is overdue for a period of more than 180 days.

By its very nature, banking involves taking risks. In most countries, banks have deployed their funds into loans, which form the bulk of their assets. Consequently, one of the most significant risks faced by banks has been and will continue to be credit risk that is the risk, which the counter party will default on his obligations as agreed. Banks are now coming up with new techniques to measure, manage and mitigate the risks to which they are exposed. Loans become non-performing when borrowers fall in arrears in the repayment of principal or interest payment or both. Some borrowers have the means to repay but do not have the willingness to repay, te. they become willful defaulters on the loans. On the other hand, there are borrowers who cannot afford to repay because of hardships of an economic nature. An economic slowdown can severely undermine the capacity of borrowers to continue servicing and to repay their debts. In such circumstances, an effective asset management policy in the financial system can help to come to grip with the problem of non-performing assets and so prevent a crisis that may go out control. Traditionally, banks have placed undue reliance on the collaterals when credit facilities. When borrowers default and all means are exhausted to recover their dues, banks finally have to foreclose the assets held as security. The foreclosing and disposal of the assets do not always produce the desired results.

Process of credit risk management

Credit management is the process of granting credit, setting the terms it’s granted on, reconvening this credit when it's due, and ensuring compliance with company policy, among other credit related functions. The goal within a bank or company in controlling credit is to improve revenues and profit by facilitating sales and financial risks. Contemporary banking organizations are exposed to a diverse set of and non-market risks, and the management of risk has accordingly become a core within banks, Banks have invested in risk management for the good economic raw their shareholders and creditors demand it. But bank supervisors also have an obvious interest in promoting strong risk management at banking organizations because a safe and sound banking system is critical to economic growth and to the stability of financial markets. Indeed, identifying, assessing, and promoting sound risk management pr have become central elements of good supervisory practice.

The credit risk management process should be articulated in the bank's loan policy, duly approved by the Board. Each bank should constitute a high level Credit P Committee (CPC), to deal with issues relating to credit policy and procedures and analyze, manage and control credit risk on a bank wide basis. The Committee should be headed by the Chairman/CEO/ED, and should comprise heads of Credit Depart Treasury, Credit Risk Management Department (CRMD) and the Chief Economist. Committee should formulate clear policies on standards for presentation of credit proposal, financial covenants, rating standards and benchmarks, delegation of credit approving powers, prudential limits on large credit exposures, asset concentrations, standards for loan collateral, portfolio management, loan review mechanism, risk concentrations monitoring and evaluation, pricing of loans, provisioning, regulatory/legal compliance etc. Concurrently, each bank should also set up Credit Risk Management Department (CRDM). The CRMD should enforced identify problems and correct deficiencies, develop management information system/data and undertake loan review/audit. Large banks may consider separate set up for review/audit. The CRMD should also be made accountable for protecting the quality of an entire loan portfolio.

Research methodology

The purpose this study is to analyze portfolio management and various aspect of to theory. To achieve these objectives, some methodology have been adopted which includes research design, population and sample, sources of data collection techniques, data analysis tools and so on.

Research design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions. Since the study is related to the Credit risk management and profitability of some of the listed Nepalese commercial banks. Descriptive and Exploratory research designs are the two fundamental categories of research design. The use and adoption of both research designs is primarily based on the nature and requirements of the study. The exploratory research design can better fit in this researcher because of highlighting the links (significant or insignificant) between credit risk and bank profitability. It is supposed that finding these links will help the Nepalese commercial banks to avoid credit risks in the future.

Population and Sample:

Number of commercial banks listed in NEPSE are 27(2071 B.S.). The commercial banks which are listed in NEPSE are population of the study among them Nabil bank limited, Himalayan bank limited and Everest bank limited are taken as convenience sample for the study. The credit risk management on profitability will not be the same on all the sampled commercial banks. The study was limited to identifying the relationship of credit risk management and profitability of three commercial banks in Nepal. Further, the results of the study were limited to banks sampled and were not generalized for all the commercial banks in Nepal. The researcher used simple correlation for the analysis. The data was collected from the sampled banks annual reports 2070/71to 2074/75.

Sources of data

Data collection is a process of collecting information from all the relevant sources to find answers to the research problem and evaluate the outcomes. Data collection methods can be divided into two categories: primary and secondary data. In this study researcher used secondary data for analysis.

Secondary data has already been published in annual report, books, newspaper, magazines, journals, online portals etc. Application of secondary data in the study plays an important role in terms of increasing the levels of research validity and reliability.

Data analysis

Data were analyzed by using descriptive analysis, reliability analysis; ratio analysis and correlation analysis were conducted through the data analysis process. Pearson correlation coefficient was used to determine the strength of relationship between the two variables i.e credit risk management and profitability.

Everest Bank Ltd (EBL)

Everest Bank Ltd (EBL) was established in 1992 under the company act Punjab National Bank Ltd; India holds 20% of equity of EB. The management of EBL is also managed by Punjab National Bank.

NABIL Bank Limited (NABIL)

NABIL Bank limited is the nation's first private sector and joint venture commercial bank, commencing its business since July 1984. Initially, Dubai Bank Limited 50% of equity share in NABIL. The equity owned by Dubai Bank Ltd transferred to Emirates bank international limited, Dubai. Currently, these 50% of equity share is held by National Bank Ltd. Bangladesh.

Himalayan Bank Limited (HBL)

Himalayan Bank Ltd was established in 1992 is a joint venture bank under the company act, 1964. Its joint venture partner is Habib Bank Ltd. Pakistan, the first joint venture bank managed by Nepali chief executive. HBL started its operation from 1993 February.

Dependent variables

The measures of bank performance may be varied and the choice of the performance measure depends on the objective of the study. Traditional measures of performance are (ROA - return on assets, ROE - return on equity, cost to income interest margin), economic measure of performance (EVA-economic value added), RAROC (risk adjusted return on capital) and market based measure of performance(total share return, price-earnings ratio, price-to-book value, credit default swap). Thus, choice of the best measure of performance is tedious task. Moreover, studying the bank performance concept may generate different results depending on the nature of the stakeholders which analyze the term. If they are depositors, the capacity of banks to manage their savings is the measure of performance; if they are equity-holders, then the performance is reflected in obtaining the satisfied levels of divisible profit and if they are banks' managers, then the performance is considered from profit point of view and also taking into effects of credit risk on the performance of bank. The paper is based on ROA and ROE as dependent variable to represent bank performance which express the risk taking behavior of bank management in obtaining the satisfied level of profit per unit of total resources. ROA measures the profit earned per rupees and ROE measures the ability of a firm to generate profit from its share holder’s investment in the company and reflect how well bank management uses the bank's real investments resources to generate profits.

Independent Variables

The independent variable is the variable is the variable the experimenter changes or controls and assumed to have a direct effect on the dependent variable. Two types of data (dependent and independent variables)are collected based on the theoretical model of the study. The dependents variables are ROE (Return on Equity) and ROA (Return on Assets) and conversely the independent variables are the factors that affect bank profitability including the credit risk. So the independent variables includes total loans and advances lending to customers and banks, non- performing loans and advances to customers and banks, total assets, net interest income of bank, total expenses, capital adequacy ratio etc.

Capital adequacy ratio

Capital Adequacy Ratio is also known as capital to risk (weighted) assets ratio is the ratio of bank's capital to its risks. It is used to determine the bank's capacity to meet the time liabilities and other risks such as credit risk, operational risks. National regulators track a bank's car to ensure that it can absorb a reasonable amount of loss and compiles with statutory capital requirements. It is a measure of a bank’s capital. It is expressed as a percentage of a bank's risk weighted credit exposures. The enforcement of regulated levels of this ratio is indented to protect depositors and promote stability and efficiency of financial systems around the world.

Two types of capital are measured: Tier 1 capital or core capital consists of equity capital, intangible assets and audited revenue reserves is used to absorb losses and does not requires a bank to cease operations and Tier two capital comprises unaudited retained earnings, unaudited reserves and general loss reserves which can absorb losses in the event of a winding-up or liquidating and provides a lesser degree of protection to depositors.

Risk-weighted assets are used to determine the minimum amount of capital that must be held by banks and other financial institutions in order to reduce the risk of insolvency. The capital requirement is based on a risk assessment for each type of bank asset. The capital used to calculate the capital adequacy ratio is divided into two tiers.

The two capital tiers are added together and divided by risk-weighted assets to calculate a bank's capital adequacy ratio. Risk-weighted assets are calculated by looking at a bank's loans, evaluating the risk and then assigning a weight. When measuring credit exposures adjustments are made to the value of assets listed on a lender's balance sheet.

Profitability

Profit is an absolute number determined by the amount of income or revenue above and beyond the costs or expenses a company incurs. It is calculated as total revenue minus total expenses and appears on company's income statement. Every organizations objective is always to make a profit. Profitability is closely related to profit. Profit is an absolute amount while profitability is a relative one. It is the metric used to determine the scope of a company's profit relation to the size of the business. Profitability is a measurement of efficiency and ultimately its success or failure. Profitability is a ability of a company to use its resources to generate revenue in excess of its expenses. This is a company's capability of generating profits from its operations. It is one of four blocks for analyzing financial statements and company performance as a whole. The other three are efficiency, solvency and market prospects.

Investors, creditors and managers use these key concepts to analyze how well a company is doing and the future potential it could have if operations were managed properly.

The two key aspects of profitability are revenues and expenses. Revenues are the business income. This is the amount of money earned from customers by selling products or providing services. Generating income isn't free, however businesses must use their resources in order to produce these products and provide these services.

Analytical Tools

There are numerous sources through which data can be sourced for a research work. In this study, researcher concern with secondary sources and analyzed by both statistical and financial tools. The data obtained from the annual report and audited financial accounts of all the existing deposit money bank from2070/71 to 2074/75 B.S.

Table No.1

RAO and ROE of NABIL,EBL AND HBL

Year/ Bank	NABIL		EBL		HBL	
	ROA	ROE	ROA	ROE	ROA	ROE
070/71	2.89	27.97	2.25	28.4	1.30	16.85
071/72	2.06	22.73	1.85	22.85	1.34	17.06
072/73	2.32	25.61	1.59	18.38	1.94	24.53
073/74	2.69	22.41	1.83	16.04	2.19	21.58
074/75	2.61	20.94	1.97	16	1.67	14.17
Average	2.514	23.932	1.898	20.334	1.688	18.838

Note: Annual report of sample bank from (071/72 - 074/75)

From above table average ROE of NABIL bank is more than others. A rising ROE suggest that a company is increasing its ability to generate profit without needing as much capital. It also indicates how well a company's management is deploying the shareholder's capital. In other words higher the ROE is better. Average ROA of NABIL bank is higher than all sampled banks. A rising ROA suggests that a company higher efficiency of generating earnings.

Table No.2

Capital Adequacy ratio and Capital Adequacy ratio

Year/ bank	Capital Adequacy ratio			Capital Adequacy ratio		
	NABIL	EBL	HBL	NABIL	EBL	HBL
070/71	11.24	13.33	11.23	2.23	0.97	1.96
071/72	11.57	12.66	11.14	1.82	0.66	3.22
072/73	11.73	14.54	10.84	1.14	0.38	1.23
073/74	12.42	14.20	12.15	0.80	0.25	0.85
074/75	13	13.74	12.46	0.55	0.20	1.11
Average	11.992	13.694	11.564	1.308	0.492	1.674

Note: Annual report of sample bank from (071/72 - 074/75)

The capital adequacy ratio measures a bank's financial strength by using its capital and assets. Generally a bank with a high CAR is considered safe and likely to meet its financial obligation. From the above table EBL shows high CAR. Non-performing assets (NPAs) is a indicator to regulators that the financial health of the bank as at risk. High ratio of non-performing loans in banking system or rising tendency leads to increase in allowance to be allocated for aforementioned loans and thus to a decrease in the profitability and capital adequacy ratio of the banks. From the same table non-performing assets of HBL is higher than of all selected banks.

Considered from the points of economics, increase in non-performing loans, negatively effects of the economic growth by causing to a decrease in loanable funds. Non-performing loan can enhance the insolvency of banks leading to bank failure.

Correlation between Capital Adequacy Ratio and Non-Performing Assets

Result chart

Bank	NABIL	EBL	HBL
Correlation(r)	-0.92706	-0.61008	-0.52867
Probable error(P.E.)	0.2207	1.1362	1.3040
Result	significant	Significant	Significant

From the above result chart the coefficient correlation (r) of three banks are negative. It is concluded that better the credit risk management higher the profitability HBL correlation is negative but least of all selected banks. So it is positive factor for related banks.

Table No.3

Loans and advance to Total Assets

Year/ bank	NABIL	EBL	HBL
070/71	0.72	0.62	0.7082
071/72	0.60	0.65	0.69
072/73	0.56	0.59	0.66
073/74	0.63	0.55	0.65
074/75	0.63	0.67	0.62
Average	0.628	0.616	0.6656

Note: Annual report of sample bank from (071/72 - 074/75)

From above table, Loans and Advance to Total Assets of HBL is higher than all selected banks. It indicates that ability of HBL to utilize its deposit in the form of loan and advances to earn high return than other sampled banks.

Table no.4

Correlation between Non-Performing Assets and Loans and Advance to Total Assets

Year/ bank	Non-Performing Assets			Loans and Advance to Total Assets		
	NABIL	EBL	HBL	NABIL	EBL	HBL
070/71	2.23	0.97	1.96	0.72	0.62	0.7082
071/72	1.82	0.66	3.22	0.60	0.65	0.69
072/73	1.14	0.38	1.23	0.56	0.59	0.66
073/74	0.80	0.25	0.85	0.63	0.55	0.65
074/75	0.55	0.20	1.11	0.63	0.67	0.62

Note: Annual report of sample bank from (071/72 - 074/75)

Result chart

Bank	NABIL	EBL	HBL
Correlation(r)	0.4988	0.1749	0.688
Probable error(P.E.)	1.3594	1.4932	0.9524
Result	Not significant	Not Significant	Not Significant

The correlation coefficient (r) indicates that with increasing the non-performing loans ratio, the rate of return on equity is decreased. From above table non-performing assets ratio of HBL is higher than others. It is not good sign for related bank. Similarly the correlation between non- performing assets and loans and advance to total assets(r= 0.688299) is higher than others, means if non-performing assets increases profit will be decreases and vice versa.

Result and findings

ROA of all selected banks (from table 1) are in fluctuating trend. Average ROA of Nabil bank is 2.514, EBL is 1.898 and HBL is 1.688.But average ROA of Nabil bank is higher than all sampled banks. So efficiency of Nabil bank generating earning is higher than others. Similarly, ROE of Nabil and HBL is fluctuating where as EBL is in decreasing trend. The average of ROE of Nabil, EBL and HBL is 23.932, 20.334 and 18.838 respectively Average ROE of Nabil bank is higher than that of all selected banks. Decreasing trend indicates that decreasing ability to generate profit and need to investment much capital. ButROEof Nabil is fluctuating trend means average ability to generate profit. Correlation of capital adequacy and non-performing assets Nabil, EBL and HBL is - 0.92706, -0.61008 and -0.52867 respectively. Similarly correlation of non-performing assets and loans and advance to total assets of Nabil, EBL and HBL is 0.498877, 0.174981 and 0.688299 respectively.

Result shows that average ROA of Nabil bank is higher than that of all selected banks. A rising ROA suggests that a company higher efficiency of generating earnings similarly, average ROE of Nabil bank is higher than that of all. High ROE indicate that business is very sufficient to generating profit. Coefficient correlation between capital adequacy ratio and non-performing assets of all three selected banks are negative.lt is concluded that better the credit risk management higher the profitability. Similarly correlation of HBL is negative but least of all. So it is positive factor for related banks Correlation coefficient of all three banks between non- performing assets and loans and advance to total assets are positive. Higher non performing ratio, the rate of return on equity is decreased.

The correlation coefficient (r) indicates that with increasing the non-performing loans ratio, the rate of return on equity is decreased. From above table non-performing assets ratio of HBL is higher than others. It is not good sign for related bank. Similarly the correlation between non- performing assets and loans and advance to total assets (r =0.688299) is higher than others, means if non-performing assets increases profit will be decreases and vice versa.

From above table average ROE of NABIL bank is more than others. A rising ROE suggest that a company is increasing its ability to generate profit without needing as much capital. It also indicates how well a company's management is deploying the shareholder's capital. In other words higher the ROE is better. Average ROA of NABIL bank is higher than all sampled banks. A rising ROA suggests that a company higher efficiency of generating earnings.

Discussion

Result shows that average ROA of Nabil bank is higher than that of all selected banks. A rising ROA suggests that a company higher efficiency of generating earnings. Similarly, average ROE of Nabil bank is higher than that of all. High ROE indicate that business is very sufficient to generating profit. Coefficient correlation between capital adequacy ratio and non-performing assets of all three selected banks are negative. It is concluded that better the credit risk management higher the profitability. Correlation of HBL is negative but least of all. So it is positive factor for related banks. Correlation coefficient of all three banks between non-performing assets and loans and advance to total assets are positive. Higher non-performing ratio, the rate of return on equity is decreased. Return of assets (ROA) is a profitability ratio that provides how much profit a company is able to generate from its assets. An ROA that rises over time indicates the company is doing a good job of increasing its profit with each investment. A falling ROA indicates the company might have over-invested in assets that have failed to produce revenue growth is a sign of company's trouble.

Limitations of the Research

The research study used secondary data obtained from published annual financial report and focused on credit risk in the selected commercial banks in Nepal. It is obvious that, other types of risks also such as liquidity risk market risk and country risk highly influencing the loan performance and needs to be addressed extensively in banking sector. There were only 3 commercial banks were considered out of 27(according to 2070 B.S.) listed commercial banks.

Summary and Conclusions

The research findings have showed that there is a relationship between credit management and profitability such that credit management affects profitability. When asked about the application of the credit management principles in the banking institutions, majority of the respondents indicated that credit management principles were widely used in the banking and even microfinance institutions. Therefore policy makers should come up with policies that enhance profitability through prudent credit risk management. These policies should be reviewed periodically to be in check with reality Profitability is a key pillar to the stability of the financial system, consistent loss making by commercial banks can lead to adverse effect on the country's financial system. Therefore central bank plays a key role in ensuring that the financial system is safe guarded by establishing policies and regulations. To enhance profitability in credit management, the credit risk measures should be tightened. Banks should develop management systems that feature the creation of credit risk management objectives, the careful monitoring of progress against these goals, tighter expense control, and more aggressive pricing and collection procedures. This however should be based on business intelligence systems. By constantly enhancing existing credit risk management tools banks are able to work towards achieving best practices.

The banks in Nepal would benefit from adopting sound strategies to improve control over credit risk. Diversification, hedging, corporate governance, capital adequacy ratio are the strategies of credit risk management. Problems arising from credit risk can be solved by implementing some combination of these strategies. Government of Nepal to ensure that commercial banks take appropriate risk management measures to help keep them from failures. Bank can help contribute to the development and improved welfare of the economy. Effective training and refresher courses should be giving to bank employees in the areas of risk management, risk control and credit utilization in order to ensure proper usage and performance.

Reference

Bhandari. D. R. (2003). *Principle and Practices of Banking and Insurance.* Bagbazar Kathmandu: Asia Publications.

Bhattarai, S. (2004). *Implementation of Directives Issued by Nepal Rastra Bank: A comparative Study of Nepal SBI bank Limited and Nepal Bangladesh Bank Limited.* An unpublished Master Degree Thesis. Tribhuvan University

Cooper.S.K. and Fraser R.D. (1983). *The Financial Marketplace*. California: Addison- Wesley Publishing Company.

Francis, J. C. (2003). *Investment Analysis and Management*. Post Graduate Publications, Eleventh Edition

Gupta, S.C (2000). *Fundamental of Statistic.* Mumbai: Himalyan Publishing House.

Heffeman, Shelagh (1996): *Modern Banking in Theory and Practice*, Wiley publisher.

Joshi, S. (2000), *Micro & Macro Economic Analysis,* Taleju Prakashan,

Khadka, A. (2002) *A Comparative study on Investment policy of Commercial Banks, An Unpublished Master Thesis*, Tribhuvan University

Kothari, C.R.(2004), *Research methodology, methods and techniques*. Willey Eastem Limited.

Muhammad J. and Garba(2014): An evolution of the effects of credit risk management on the profitabilityof Nigerian banks, *Journal of modern Accountancy and Auditing.10(1),104-115*

Myrna R.Berrios (2013): *The international journal of business and finance research*. Modern Hairstyling Institute. V. 7(3) p. 105-118